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10/604,498

7/25/2003

Claims

- [c1] ① An imaging X-ray tube rotor assembly for an imaging tube comprising, at least partially, a magnetic non-corrosive material.
- [c2] 2. An imaging X-ray tube rotor assembly as in claim 1 comprising:
a rotor core produced at least partially from a magnetic non-corrosive material.
- [c3] 3. An imaging X-ray tube rotor assembly as in claim 2 wherein said rotor core approximately comprises at least 12% chromium.
- [c4] 4. An imaging X-ray tube rotor assembly as in claim 2 wherein said rotor core at least partially comprises stainless steel.
- [c5] 5. An imaging X-ray tube rotor assembly as in claim 2 further comprising an oxidized exterior surface.
- [c6] 6. An imaging X-ray tube rotor assembly as in claim 2 further comprising:
a slot integrally formed with said rotor core; and
a bar produced at least partially from a non-magnetic

378/125-133,
particularly:
127-129, (131)
310
335/2204
336
(417/410.1)
pumps
310/211, 212,
215, 261,
270 D12
265?

highly conductive material coupled to said slot.

[c7] 7. An imaging X-ray tube rotor assembly as in claim 6 wherein said non-magnetic highly conductive material comprises at least one of the following: copper, aluminum, silver, nickel, cobalt, and an alloy formed of two or more of the stated materials.

[c8] 8. An imaging X-ray tube rotor assembly as in claim 2 further comprising:
a plurality of slots integrally formed with said rotor core;
and
a plurality of bars produced at least partially from a non-magnetic highly conductive material and coupled to said plurality of slots.

[c9] 9. An imaging X-ray tube rotor assembly as in claim 8 wherein said non-magnetic highly conductive material comprises at least one of the following: copper, aluminum, silver, nickel, cobalt, and an alloy formed of two or more of the stated materials.

[c10] 10. An imaging X-ray tube rotor assembly as in claim 2 further comprising:
a sheet coupled to said rotor core and produced at least partially from a non-magnetic highly conductive material; and

a sleeve coupled to said sheet and produced at least partially from a non-magnetic non-corrosive material.

[c11] 11. An imaging X-ray tube rotor assembly as in claim 10 wherein an exterior oxidized surface of said sleeve is oxidized.

[c12] 12. An imaging X-ray tube rotor assembly as in claim 10 wherein an exterior oxidized surface of said sleeve is non-oxidized.

[c13] 13. An imaging X-ray tube rotor assembly as in claim 10 wherein said non-magnetic highly conductive material comprises at least one of the following: copper, aluminum, silver, nickel, cobalt, and an alloy formed of two or more of the stated materials.

[c14] 14. An imaging X-ray tube rotor assembly as in claim 10 wherein said non-magnetic non-corrosive iron based material comprises approximately at least 12% chromium.

*Fe-based
is looking
antecedent!*

[c15] 15. An imaging X-ray tube rotor assembly as in claim 10 wherein said non-magnetic non-corrosive iron based material comprises stainless steel.

[c16] 16. An imaging X-ray tube rotor assembly comprising:
a rotor core produced at least partially from stainless

steel and comprising;

a plurality of slots integrally formed with said rotor core;

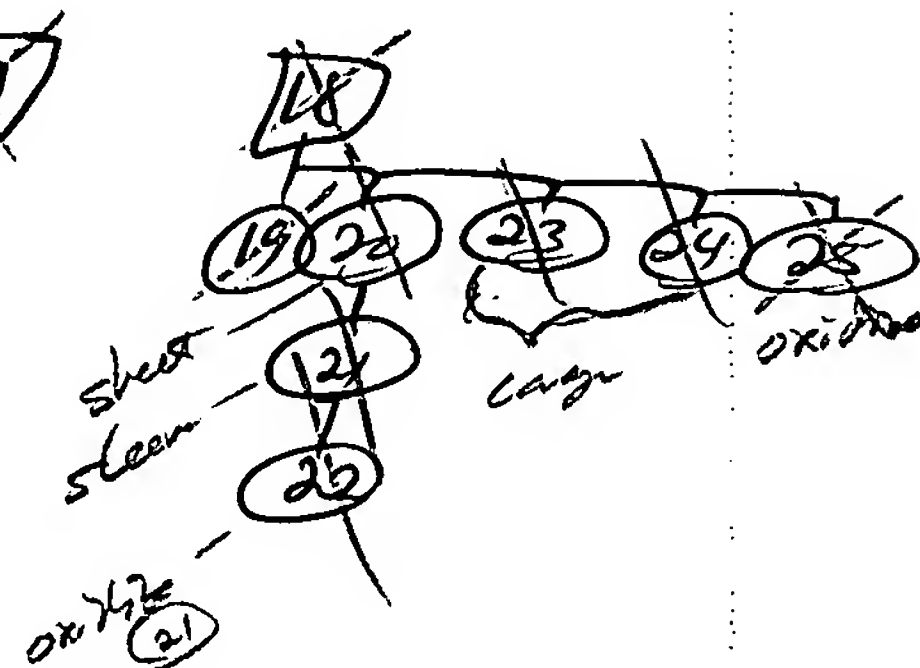
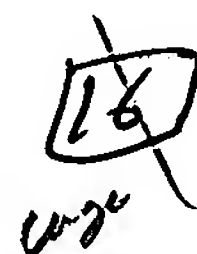
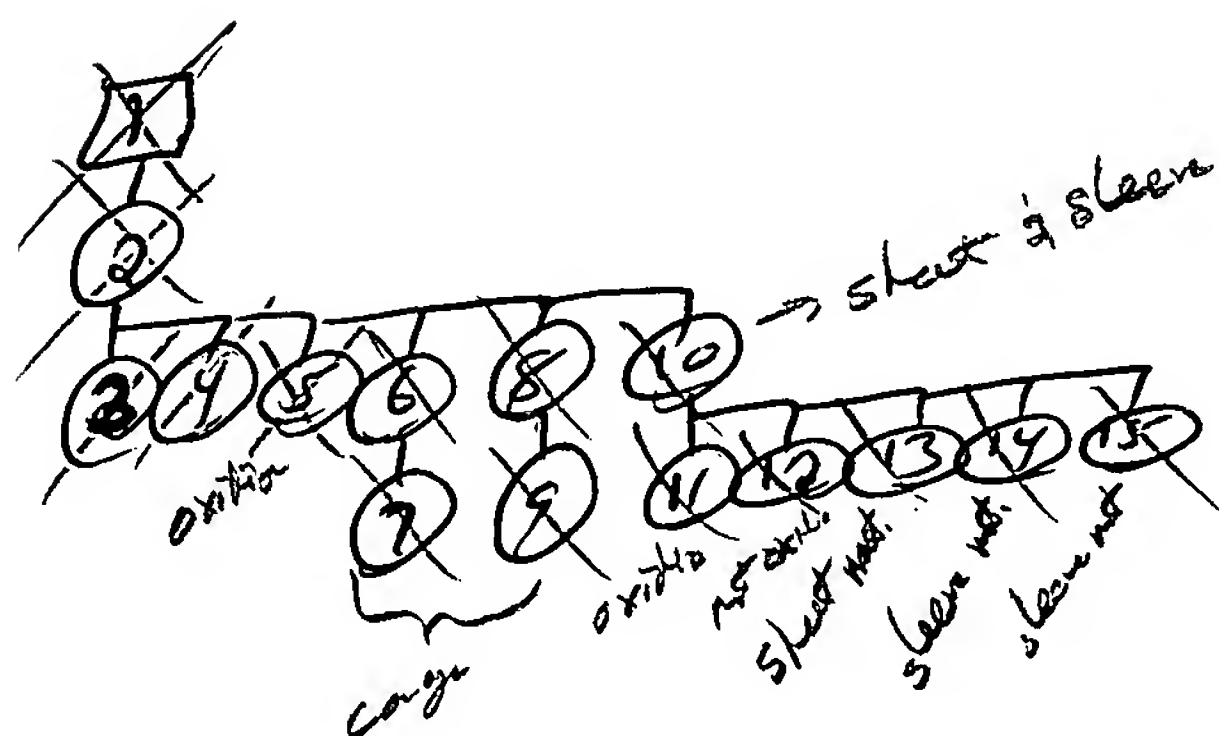
and

a plurality of bars produced at least partially from a non-magnetic highly conductive material and coupled to said plurality of slots.

- [c17] 17. An imaging X-ray tube comprising an imaging tube rotor assembly having a rotor core produced at least partially from a magnetic non-corrosive material.
- [c18] 18. A method of producing an imaging X-ray tube rotor assembly comprising forming a rotor core at least partially from a magnetic non-corrosive iron based material.
- [c19] 19. A method as in claim 18 wherein forming a rotor core comprises forming said rotor core at least partially from chromium.
- [c20] 20. A method as in claim 18 further comprising forming a sheet over said rotor core and at least partially from a non-magnetic highly conductive material.
- [c21] 21. A method as in claim 20 further comprising forming a sleeve produced at least partially from a non-magnetic non-corrosive material over said sheet.
- [c22] 22. A method as in claim 21 further comprising oxidizing

an exterior surface of said sleeve.

- [c23] 23.A method as in claim 18 further comprising:
integrally forming a slot in said rotor core; and
forming a bar within said slot and at least partially from
a non-magnetic highly conductive material.
- [c24] 24.A method as in claim 18 further comprising:
integrally forming a plurality of slots in said rotor core;
and
forming bars within said plurality of slots and at least
partially from a non-magnetic highly conductive material.
- [c25] 25.A method as in claim 18 further comprising oxidizing
an exterior surface of the imaging tube rotor assembly.



$$\begin{aligned} 16 &= 1+2+4+8 \\ 17 &= 1+2 \\ 18 &= 1+2+4+8+16 \text{ (Fe-based)} \\ 19 &\approx 3 \\ 20+21 &\approx 10 \\ 22 &= 11 \\ 23 &= 6 \\ 24 &= 8 \\ 25 &= 5 \end{aligned}$$